

**MONOLITHIC YTTRIA-ALUMINA CERAMIC
PLASMA REACTOR CHAMBER ELEMENTS
HAVING HIGH FRACTURE TOUGHNESS**

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ABSTRACT

A component of a plasma reactor chamber for processing a semiconductor workpiece, the component being a monolithic ceramic piece formed from a mixture of yttrium aluminum perovskite (YAP) and yttrium aluminum garnet (YAG) formed from a mixture of yttria and alumina powders, the ratio the powders in said mixture being within a range between one ratio at which at least nearly pure yttrium aluminum perovskite is formed and another ratio at which at least nearly pure yttrium aluminum garnet is formed.

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